ALMAZ BUTAEV, University of Calgary

On geometric preduals of jet spaces on subsets of $\mathbb{R}^n$

For a closed set $S \subset \mathbb{R}^n$ the jet space $J_b^{k,\omega}(S)$ is the Banach space of vector functions whose components are partial derivatives of functions in $C_b^{k,\omega}(\mathbb{R}^n)$ evaluated at points of S equipped with the corresponding quotient norm. The geometric predual $G_J^{k,\omega}(S)$ of $J_b^{k,\omega}(S)$ is the minimal closed subspace of the dual $\left(C_b^{k,\omega}(\mathbb{R}^n)\right)^*$ containing the evaluation functionals of all partial derivatives of order $\leq k$ at points in S. In this talk, we study some geometric properties of spaces $G_J^{k,\omega}(S)$ related to the classical Whitney problems. This talk is based on joint work with Alex Brudnyi.